

Claims

1. A navigation method comprising:

providing a motor vehicle with a location signal receiver for receiving externally generated location signals and a location processor for generating a location data based on the received location signals;

providing a map database having a plurality of road data representing a plurality of roads;

providing a call receiving center;

providing a wide area network including a wireless link to the motor vehicle;

receiving said location signals at said location signal receiver;

generating location data based on said received location signals;

communicating, through the wireless link, a route request signal from the motor vehicle to the call-receiving center, the route request including the location data and a destination identifier;

retrieving at said call-receiving center, at least a subplurality of the road data in response to said received route request signal;

generating a route data based on said retrieved road data, said location data and said destination identifier;

transmitting the route data to said motor vehicle, through at least said wireless link, to the motor vehicle;

presenting route instruction information to the user based on said route data.

2. A method according to claim 1 wherein said communicating includes transmitting an initial request from the user to the call center, transmitting a destination inquiry from the call center to the user in response to the initial request, and transmitting

a reply request from the user to the call center in response to the destination inquiry, the reply request including the destination identifier.

3. A method according to claim 1 further including receiving an externally generated traffic condition data and wherein said route data is generated further based on said received traffic condition data.

4. A method according to claim 1 further includes receiving an externally generated traffic condition data wherein said route data includes a traffic condition description data based on said traffic condition data, and wherein said presenting route information further presents a route traffic condition information to the user representing said traffic condition description data.

5. A method according to claim 4 further including transmitting an alternate route inquiry from said call center to said user, and presenting an alternate route inquiry information to the user in response.

6. A method according to claim 1 further including calculating a distance-to-destination value based on said location data and said route, and presenting distance to-go information to the user based on said distance-to-destination.

7. A method according to claim 1, further including automatically generating an updated location data based on said received location signals and automatically sending a route verification signal from the motor vehicle to the call center, through the wireless link, the route verification signal including said updated location data, verifying the updated location data to reflect a position valid based on the route data, and transmitting a route deviation alert to the motor vehicle

8. A method according to claim 1, wherein the transmitting the route data to said motor vehicle, through at least said wireless link, to the motor vehicle overlaps with said presenting route instruction information to the user based on said route data.

9. A method according to claim 1, wherein communicating includes:

communicating over said wireless link a first route request signal including the location data;

communicating from said call center, over said wireless link, a first query;

communicating from said motor vehicle to said call center, over said wireless link, a response to said first query, said response including a destination data;

determining, at said call center, whether or not said destination data represents a valid address;

communicating a result of said determining, from said call center to said motor vehicle, over said wireless link.